

Nuclear Energy is Ontario's Best Option for Achieving Net Zero and Long-term Economic Prosperity



BY JEFF PARNELL
President
Power Workers' Union

Remarks made by the UN Secretary-General at the recent COP27 underscore the importance of Ontario acting sooner than later to invest in new nuclear energy. Despite decades of climate talks, the Secretary-General lamented the lack of progress on saving the planet from excessive warming from greenhouse gas (GHG) emissions, and that the world is “on a highway to hell with its foot on the accelerator”.

Getting to Net Zero carbon emissions by 2050 means a massive transition from fossil fuels to non-emitting energy sources. Recently, Ontario appointed an Electrification and Energy Transition Panel that will advise the government on the highest value short, medium, and long-term opportunities i.e., to create jobs, affordable energy rates and an attractive economic investment environment. The Panel will also identify opportunities to improve Ontario's long-term energy planning process, including better coordination between the fuels and electricity sectors. Their work will be informed by two reports, to be completed by the end of 2022 – an independent, Cost-Effective Energy Pathways Study and another by the Independent Electricity System Operator on achievable pathways to decarbonization. This advice is intended to help guide government decisions going forward.

There is already ample evidence pointing to Ontario's best option for achieving long-term, low-carbon energy security and enhanced economic competitiveness — build more nuclear reactors. A look back over the last sixty years shows that besides providing safe, reliable, affordable low-carbon electricity, Canada's successful CANDU nuclear technology has contributed substantial environmental and economic benefits.

As the IESO's Gas Phase Out Report notes, Ontario currently has one of the cleanest electricity systems in the world. This is primarily due to the 24/7 baseload energy produced by the province's nuclear fleet. Our challenge is to maintain that performance and improve it even further as demand for low-carbon electricity rises faster than ever before, and while low-carbon assets like the 3,000 MW Pickering Nuclear Generating Station are retired.

Building new nuclear reactors in Ontario is a cost-effective investment compared to other low-carbon energy resources. The International Energy Agency's 2020 Report, Projected Costs of Generating Electricity (produced every five years) indicated that nuclear remains the dispatchable low-carbon

technology with the lowest expected costs in 2025, comparable to large reservoir hydro plants. Also, Canada's nuclear sector is governed by a robust regulatory framework that, unlike other energy sources, includes a well-funded, safe and secure waste management plan.

This “Ontario-centric” industry generates about \$6 billion (B) annually in revenues and supports more than 200 supply chain companies and about 76,000 direct and indirect jobs. The uranium comes from Saskatchewan. Investments in new reactors will stimulate continued growth in broader societal benefits including the production of more, life-saving medical isotopes; “friend-shoring” foreign diplomacy; and the production of low-carbon hydrogen.

Climate change is no longer an emerging issue, it is a pressing global challenge. Around the world, efforts to address and adapt to the environmental, societal, and economic impacts of our changing climate are driving an intense competition for low-carbon energy security. Canada, the United States, and the United

Kingdom have already committed to phasing out natural gas generation by 2035. While fossil fuels are expected to remain in the global supply mix until 2050, the policy field is rapidly changing to help accelerate a low-carbon energy transition before this date. Today, the environmental and economic benefits of nuclear energy are recognized around the world. Governments and financial investors are supporting nuclear investments with green bonds and tax credits. For example, recently, Canada announced tax credits for the new 300 MW small modular reactor at Darlington and the Canada Infrastructure Bank announced a \$1B investment in the project. Ontario's low-carbon nuclear energy foundation has been stimulating economic growth for decades - well before climate change became the issue it is today. It's a solid, proven domestic technology with assets, infrastructure and expertise worth leveraging to ensure long-term, low-carbon energy security and economic growth and competitiveness for Ontario. Ontario needs to move quickly to develop new large-scale nuclear generation to power a timely transition to Net Zero.

Ontario's Nuclear Technology Can Power the Massive Transition from Fossil Fuels to Non-emitting Energy Sources

Meeting the rapidly increasing demand for more low-carbon electricity requires maintaining and expanding Ontario's clean energy advantages.

Building on our proven strengths – new, large-scale nuclear generating stations is Ontario's best option for achieving:

- Net Zero carbon emissions
- Long-term, low-carbon energy security, and
- Enhanced economic competitiveness

FROM THE PEOPLE WHO HELP KEEP THE LIGHTS ON

